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Entropic Communications, LLC

UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

ENTROPIC COMMUNICATIONS,
LLC,

Plaintiff,

v.

COX COMMUNICATIONS, INC.;
COXCOM, LLC; AND COX
COMMUNICATIONS CALIFORNIA,
LLC,

Defendants.

Case No. : 2:23-cv-1049-JWH-
KES

~~ORIGINAL~~ FIRST AMENDED
COMPLAINT FOR PATENT
INFRINGEMENT

1 Plaintiff, Entropic Communications, LLC (“Entropic”), files this complaint for
2 patent infringement against Cox Communications, Inc. (“Cox Communications”),
3 CoxCom LLC (“CoxCom”), and Cox Communications California, LLC (“Cox
4 California”), (collectively “Cox”) and in support thereof alleges as follows:

5 1. This is a civil action arising under the patent laws of the United States, 35
6 U.S.C. § 1 *et seq.*, including specifically 35 U.S.C. § 271, based on Cox’s infringement
7 of U.S. Patent Nos. 8,223,775 (the “’775 Patent”), 8,284,690 (the “’690 Patent”),
8 8,792,008 (the “’008 Patent”), 9,210,362 (the “’362 Patent”), 9,825,826 (the “’826
9 Patent”), 10,135,682 (the “’682 Patent”), 11,381,866 (the “’866 Patent”), ~~and~~
10 11,399,206 (the “’206 Patent”), 11,785,275 (the “’275 Patent”), and 9,866,438 (the
11 “’438 Patent”) (collectively, the “Patents-in-Suit”).

12 **THE PARTIES**

13 2. Entropic is a Delaware limited liability company with an office at 7150
14 Preston Road, Suite 300, Plano, Texas 75024.

15 3. Entropic is the owner by assignment to all right, title, and interest to the
16 Patents-in-Suit. Entropic is the successor-in-interest for the Patents-in-Suit.

17 4. Upon information and belief, Cox Communications is a privately-owned
18 subsidiary of Cox Enterprises Inc. and is a Delaware Corporation with a principal place
19 of business at 6205 Peachtree Dunwoody Road, Atlanta, Georgia 30328.

20 5. Cox Communications has, as its registered agent in Delaware, Corporation
21 Service Company, located at 251 Little Falls Drive, Wilmington, Delaware, 19808.

22 6. Upon information and belief, CoxCom is a subsidiary of Cox
23 Communications, and incorporated in Delaware, with a principal place of business at
24 6205 Peachtree Dunwoody Road, Atlanta, Georgia 30328.

25 7. CoxCom has, as its registered agent in California, Corporation Service
26 Company d/b/a CSC - Lawyers Incorporating Service Company, located at 2710
27 Gateway Oaks Dr., Suite 150N, Sacramento, California 95833.

1 8. Upon information and belief, Cox California is a Delaware limited liability
2 company, with a regular and established place of business at 6205 Peachtree Dunwoody
3 Road, Atlanta, Georgia 30328.

4 9. Cox California has, as its registered agent in California, Corporation
5 Service Company d/b/a CSC - Lawyers Incorporating Service Company, located at
6 2710 Gateway Oaks Dr., Suite 150N, Sacramento, California 95833.

7 10. Cox Communications holds itself out as “the largest private telecom
8 company in America, serving six million homes and business.”¹

9 11. Upon information and belief, CoxCom and Cox California are agents of
10 Cox Communications.

11 12. The website of Cox Communications’ parent company, Cox Enterprises,
12 Inc., identifies Cox Communications as a “division” of Cox Communications, and upon
13 information and belief, includes job listings for employment with all Cox entities,
14 including Cox Communications, CoxCom and Cox California.

15 13. Upon information and belief, employees of Cox employees, regardless of
16 the Cox entity for which they work, have email addresses with the @cox.com domain.

17 14. Cox Communications is a manager/member of CoxCom.

18 15. Cox Communications has complete control over CoxCom.²

19 16. CoxCom is a manager/member of Cox California.

20 17. Cox Communications provides cable services in at least California through
21 its agent Cox California.³

22 _____
23 ¹ [https://jobs.coxenterprises.com/en/jobs/job/r202314876-manager-marketing-](https://jobs.coxenterprises.com/en/jobs/job/r202314876-manager-marketing-analytics-b2b/)
24 [analytics-b2b/](https://jobs.coxenterprises.com/en/jobs/job/r202314876-manager-marketing-analytics-b2b/)

25 ² <https://fcc.report/IBFS/ITC-T-C-20210517-00085/7754627.pdf>

26 ³ [https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-](https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-outreach/documents/bco/go-156-procurement-plans/2020/cox-communications.pdf?sc_lang=en&hash=CC575B1DDB9F6FBB153692B6B610ED67)
27 [outreach/documents/bco/go-156-procurement-plans/2020/cox-](https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-outreach/documents/bco/go-156-procurement-plans/2020/cox-communications.pdf?sc_lang=en&hash=CC575B1DDB9F6FBB153692B6B610ED67)
28 [communications.pdf?sc_lang=en&hash=CC575B1DDB9F6FBB153692B6B610ED67](https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-outreach/documents/bco/go-156-procurement-plans/2020/cox-communications.pdf?sc_lang=en&hash=CC575B1DDB9F6FBB153692B6B610ED67)
(Accessed October 13, 2022).

18. Cox Communications provides its customers with a “Residential Customer Service Agreement” in which it “sets for the terms and conditions under which CoxCom, LLC or one or more of its subsidiaries or affiliates authorized by applicable regulatory, franchise or license authority. . . agrees to provide services.”⁴ Upon information and belief, the entity that provides the services to Cox’s customers and subscribers is Cox California.

19. Upon information and belief, Cox Communications shares management, common ownership, advertising platforms, facilities, distribution chains and platforms, stores, and accused product lines and products involving related technologies with its agents, including at least CoxCom and Cox California. For example, Cox Communications, CoxCom and Cox California, share a principal place of business at 6205 Peachtree Dunwoody Road, Atlanta, Georgia 30328.

20. Upon information and belief, Cox Communications is the corporate manager of its subsidiary LLCs that own or lease property in this district, that employ employees in this district, and that own, store, sell, demonstrate, and lease equipment in this district. Cox has the right to exercise near total control of each entity's operations through its LLC agreements with each entity.

PRESUIT DISCUSSIONS

21. Prior to filing this Complaint, Entropic sent a communication by physical means to Cox on August 9, 2022, in an attempt to engage Cox and/or its agents in good faith licensing discussions regarding Entropic's patent portfolio, including the Patents-in-Suit⁵. On December 23, 2022, Entropic sent Cox another communication by both physical and electronic means regarding a separate license to Entropic's patents for the

⁴ <https://www.cox.com/aboutus/policies/customer-service-agreement.html> (accessed October 12, 2022).

⁵ The '206 Patent was not included in the list of issued Entropic patents sent on August 9, 2022.

1 field of the standardized networking technology commonly called MoCA, and also
2 seeking to discuss with Cox a typical non-disclosure agreement. Cox has failed to
3 respond to either communication.

4 **ENTROPIC’S LEGACY AS A CABLE INNOVATOR**

5 22. Entropic Communications Inc. (“Entropic Inc.”), the predecessor-in-
6 interest to Entropic as to the Patents-in-Suit, was founded in San Diego, California in
7 2001 by Dr. Anton Monk, Itzhak Gurantz, Ladd El Wardani, and others. Entropic Inc.
8 was exclusively responsible for the development of the initial versions of the
9 Multimedia over Coax Alliance (“MoCA”) standards, including MoCA 1.0, ratified in
10 2006, MoCA 1.1, ratified in 2007, and was instrumental in the development of MoCA
11 2.0, ratified in 2010. It also developed Direct Broadcast Satellite (“DBS”) Outdoor Unit
12 (“ODU”) single wire technology, and System-on-Chip (“SoC”) solutions for set-top
13 boxes (STBs) in the home television and home video markets.

14 23. Under the technical guidance of Dr. Monk, Entropic Inc. grew to be
15 publicly listed on the NASDAQ in 2007. After the public listing, the company acquired
16 RF Magic, Inc. in 2007, a company specializing in DBS ODU technology and related
17 hardware.

18 24. Additional growth between 2007 and 2015 bolstered the technical
19 expertise of Entropic Inc. with respect to signal acquisition, stacking, filtering,
20 processing, and distribution for STBs and cable modems.

21 25. For years, Entropic Inc. pioneered innovative networking technologies, as
22 well as television and internet related technologies. These technologies simplified the
23 installation required to support wideband reception of multiple channels for
24 demodulation, improved home internet performance, and enabled more efficient and
25 responsive troubleshooting and upstream signal management for cable providers. These
26 innovations represented significant advances in the field, simplified the implementation
27 of those advances, and reduced expenses for providers and customers alike.

1 26. In 2015, MaxLinear, Inc. (“MaxLinear”)—a leading provider of radio-
2 frequency, analog, digital, and mixed-signal semiconductor solutions—acquired
3 Entropic Inc., and the pioneering intellectual property developed by Dr. Monk and his
4 team.

5 27. In 2021, Plaintiff Entropic was established and MaxLinear transferred to
6 Entropic a portfolio of intellectual property representing the Entropic and MaxLinear
7 innovation in the cable and satellite services markets.

8 28. The Patents-in-Suit are the result of years of research and development in
9 satellite and cable technology. These innovations are utilized by Cox to provide
10 enhanced and expanded services to customers, which in turn has increased revenues for
11 Cox while at the same time reducing costs.

12 29. Entropic filed a patent infringement suit against Charter Communications,
13 Inc. (“Charter”) in the Eastern District of Texas, Case No. 2:22-CV-00125-JRG, on
14 April 27, 2022, asserting the ’775 Patent, the ’690 Patent, the ’008 Patent, the ’362
15 Patent, the ’826 Patent, and the ’682 Patent against Charter’s provision of cable
16 television and internet services, cable modem products and STBs. Upon information
17 and belief, Cox analyzed the causes of action, the asserted patents, and its own products’
18 functionality in light of those patents.

19 30. Upon information and belief, Cox analyzed the causes of action in the
20 Charter Suit and the asserted patents.

21 31. Upon information and belief, Cox analyzed its products’ functionality in
22 light of the patents asserted in the Charter Suit.

23 32. Upon information and belief, Cox monitored the ongoing prosecution of
24 the ’362 Patent family, and therefore was aware the ’866 Patent issued on July 5, 2022,
25 and the ’206 Patent issued on July 26, 2022.

26 33. Upon information and belief, Cox analyzed its products’ functionality in
27 light of the ’866 Patent.

34. Upon information and belief, Cox analyzed its products' functionality in light of the '206 Patent.

JURISDICTION AND VENUE

35. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a) because the claims herein arise under the patent laws of the United States, 35 U.S.C. § 1 et seq., including 35 U.S.C. § 271.

36. Venue in this Judicial District of Central California ("District") is proper pursuant to 28 U.S.C. § 1400(b), because Cox has regular and established places of business in this District. The defendants, by themselves and/or through their agents, have committed acts of patent infringement within the State of California and within this District by using, selling, offering for sale, and/or leasing various telecommunication services products and services.

37. This Court has general personal jurisdiction over Cox because Cox conducts systematic and regular business within the State of California by, *inter alia* providing cable television, internet, and phone services to businesses and residents throughout the state.

38. Upon information and belief, Cox Communications has a regular and established place of business within this District including at least at 27121 Towne Centre Drive, Foothill Ranch, California, 92610.

39. The Court has personal jurisdiction over Cox Communications, CoxCom and Cox California, because they have committed acts of infringement within the State of California and within this District through, for example, providing through their wholly owned subsidiaries, Cox branded products and services, including, Cox Contour set top boxes and Cox digital video, audio, and other content services to customers. Cox provides cable television and internet services ("Accused Services") via the lease, sale, and/or distribution of cable modems and set top boxes both online and from Cox stores in this District. For example, Cox has and continues to sell, lease, and/or distribute the ~~Arris SB6183 cable modem, Arris CM8200 cable modem~~ [Technicolor CGM4981](#).

1 Technicolor CGM4331, Technicolor CGM4141-~~cable modem~~, Technicolor ~~CGM4331~~
2 ~~cable modem~~ CVA4004, ARRIS / Surfboard TM3402, ARRIS / Surfboard G36, ARRIS
3 / Surfboard G54, ARRIS / Surfboard S33, ARRIS / Surfboard CM8200, ARRIS /
4 Surfboard G34, ARRIS / Surfboard SB8200, ARRIS / Surfboard DG2460, ARRIS
5 TM9202, Hitron CODA56, Hitron CODA, Humax HGD310, Motorola B12, Motorola
6 MB8611, Motorola MG8725, Motorola MB8600, Motorola MG8702, Netgear
7 CM2000, Netgear C7800, Netgear CAX30, Netgear CAX80, Netgear CBR750, Netgear
8 CM1000, Netgear CM1000v2, Netgear CM1100, Netgear CM1200, Netgear CM2500,
9 Netgear CM3000, Ubiquiti UCI, ARRIS / Surfboard TG2472, ARRIS / Surfboard
10 SBG7400AC2, ARRIS / Surfboard SBG7600AC2, Motorola MB7621, Motorola
11 MG7700, Netgear C6900, Netgear C7000v2, Netgear C7500, Netgear CBR40, Netgear
12 CM600, Netgear CM700, TP-LINK TC-7650, ARRIS / Surfboard SB6183, ARRIS /
13 Surfboard SBG6900, Asus CM16, Motorola MB7420, Motorola MG7540, Motorola
14 MG7550, Netgear C6230, Netgear C6250, Netgear C6300, Netgear C6300v2, Netgear
15 CM500, TP-LINK TC-7620, TP-LINK CR500, TP-LINK CR700, TP-LINK CR1900,
16 SMC D3CM1604, Zoom 5370, and products that operate in a similar manner
17 (“Accused Cable Modem Products”), as well as the Arris AX013ANC STB, Arris
18 AX013ANM STB, Pace PX022ANC STB, Pace PX022ANM STB, Samsung
19 SX022ANC STB, Samsung SX022ANM STB, and products that operate in a similar
20 manner (“Accused Set Top Products”)⁶.

21 40. Upon information and belief, Cox Communications, CoxCom and Cox
22 California, by themselves and/or through their agents, offer various telecommunication
23

24 ⁶ Entropic provided its initial infringement contentions for the ’775, ’690, ’008, ’362,
25 ’826, ’682, ’866, and ’206 Patents on September 15, 2023. Entropic provided its initial
26 infringement contentions for the ’438 and ’275 Patents on November 3, 2023. Entropic
27 has revised this First Amended Complaint to reflect the initial infringement contentions,
28 which include references to certain documents provided in discovery to Cox by
Entropic.

1 services throughout the United States. Cox operates and maintains a nationwide
2 television and data network through which Cox sells, leases, and offers for sale or lease
3 products and services, including the Accused Services, Accused Cable Modem Products
4 and Accused Set Top Products, to businesses, consumers, and government agencies.
5 Through its subsidiaries, Cox Communications offers to sell, sells, and provides Cox
6 branded products and services, including cable modems, set top boxes, and digital
7 video, audio, and other content services to customers. Subscribers to Cox's television
8 services receive one or more receivers and/or set-top boxes within this District.
9 Subscribers to Cox's internet services receive one or more cable modems within this
10 District.

11 41. Upon information and belief, those services are provided through and
12 using the Accused Cable Modem Products and Accused Set Top Products.

13 42. Upon information and belief, Cox Communications, CoxCom and Cox
14 California, by themselves and/or through their agents, own, and/or operate their
15 businesses through *inter alia*, offices, storefronts, and/or other operational locations
16 within this District including, for example, at Cox stores located at 6234 Irvine Blvd.,
17 Irvine, California 92620; 6771 Quail Hill Pkwy., Irvine, California 92603; 23704 El
18 Toro Rd., Lake Forest, California 92630; 27321 La Paz Rd. Suite B, Laguna Niguel,
19 California 92677; and 30652 Santa Margarita Pkwy F-101B, Rancho Santa Margarita,
20 California 92688. Cox holds out these locations as its own through the use of branding
21 on the locations themselves.

22 43. Cox Communications lists these storefronts on its website and holds them
23 out as places where customers can obtain the Accused Services, Accused Cable Modem
24 Products and Accused Set Top Products.

25 44. Upon information and belief, Cox Communications, CoxCom and Cox
26 California, by themselves and/or through their agents, own and/or lease the premises
27 where these Cox stores are located.

1 45. Upon information and belief, these Cox stores are staffed by persons
2 directly employed by Cox, many of whom live in this District.

3 46. Upon information and belief, one or more of the defendants has engaged
4 in regular and established business at physical places within this District such as at these
5 Cox stores.

6 47. Upon information and belief, Cox employs and/or contracts with persons
7 and directs them to install, service, repair, and/or replace equipment, as appropriate, in
8 this District.

9 48. Upon information and belief, in each of these stores and/or service centers,
10 Cox owns and stores equipment such as ~~cable modems and set top boxes~~ the Accused
11 Cable Modem Products and Accused Set Top Products and demonstrates ~~services~~ the
12 Accused Services provided via those products to Cox customers.

13 49. On the Cox Communications website, Cox has a section regarding the
14 California Consumer Privacy Notice, which demonstrates that Cox Communications is
15 purposefully holding itself out as providing products and services in California. Cox
16 Communications explicitly confirms that this agreement applies to CoxCom and its
17 “communication related affiliates.” Upon information and belief, such communication
18 related affiliates include Cox California, and of course, Cox Communications.

19 50. Upon information and belief, Cox Communications and/or CoxCom, by
20 themselves and/or through their agent, Cox California, provides the Accused Services
21 throughout the United States and in this District.

22 51. Venue is further proper because Cox has committed and continues to
23 commit acts of patent infringement in this District, including making, using, offering to
24 sell, and/or selling Accused Services, Accused Cable Modem Products and Accused Set
25 Top Products in this District, and/or importing the Accused Cable Modem Products and
26 Accused Set Top Products into, and thereafter providing Accused Services in, this
27 District, including by Internet sales and sales via retail and wholesale stores.
28 Furthermore, for example, Cox deploys Accused Cable Modem Products and Accused

1 Set Top Products to many thousands of locations (e.g., customer premises) in this
2 District and subsequently, by means of those instrumentalities, uses the claimed
3 inventions at those locations in this District. Cox infringes by inducing and contributing
4 to acts of patent infringement in this District and/or committing at least a portion of any
5 other infringement alleged herein in this District.

6 52. Cox continues to conduct business in this District, including the acts and
7 activities described in the preceding paragraph.

8 **COUNT I**

9 **(Infringement of the '775 Patent)**

10 53. Entropic incorporates by reference each allegation of Paragraphs 1 through
11 52.

12 54. Entropic served infringement contentions which included a claim chart for
13 the '775 Patent on September 15, 2023.

14 55. ~~54.~~ The '775 Patent duly issued on July 17, 2012 from an application filed
15 September 30, 2003.

16 56. ~~55.~~ Entropic owns all substantial rights, interest, and title in and to the
17 '775 Patent, including the sole and exclusive right to prosecute this action and enforce
18 the '775 Patent against infringers and to collect damages for all relevant times.

19 57. ~~56.~~ The '775 Patent generally describes a partitioned cable modem that
20 performs cable modem functions and data and home networking functions. Functionally
21 partitioning a cable modem to perform cable modem functions and data and home
22 networking functions enables a cable modem to incorporate a variety of enhanced
23 functions. A true and accurate copy of the '775 Patent is attached hereto as Exhibit 1.

24 58. ~~57.~~ The '775 Patent is directed to patent-eligible subject matter pursuant to
25 35 U.S.C. § 101.

26 59. ~~58.~~ The '775 Patent is valid and enforceable, and presumed as such,
27 pursuant to 35 U.S.C. § 282.

1 60. ~~59.~~ Cox deploys one or more of the Accused Cable Modem Products in
2 connection with operating and providing the Accused Services.

3 61. ~~60.~~ The Accused Cable Modem Products deployed by Cox to customer
4 premises remain the property of Cox while deployed.

5 62. ~~61.~~ The Accused Cable Modem Products operate while deployed in a
6 manner controlled and intended by Cox.

7 63. ~~62.~~ As set forth in the attached nonlimiting claim chart (Exhibit 2), Cox
8 has directly infringed and is infringing at least Claims 18 and 19 of the '775 Patent by
9 using, importing, selling, and/or offering for sale the Accused Cable Modem Products
10 and/or the Accused Services.

11 64. ~~63.~~ Each aspect of the functioning of the Accused Cable Modem Products
12 described in the claim chart operates while deployed to customer premises in a manner
13 controlled and intended by Cox.

14 65. ~~64.~~ Cox provides no software, support, or other facility to customers to
15 modify any aspect of the functioning described in the claim chart of the Accused Cable
16 Modem Products while deployed to customer premises.

17 66. ~~65.~~ Cox directly infringes at least Claims 18 and 19 of the '775 Patent by
18 using, importing, selling, and/or offering for sale the Accused Cable Modem Products
19 (for example, the Technicolor CGM4141 cable modem) and/or the Accused Services
20 (for example, utilizing cable modem functions).

21 67. ~~66.~~ The use of the Accused Cable Modem Products by Cox to, for example,
22 demonstrate products in brick-and-mortar stores at 6234 Irvine Blvd., Irvine, California
23 92620; 6771 Quail Hill Pkwy., Irvine, California 92603; 23704 El Toro Rd., Lake
24 Forest, California 92630; 27321 La Paz Rd. Suite B, Laguna Niguel, California 92677;
25 30652 Santa Margarita Pkwy. F-101B, Rancho Santa Margarita, California 92688, or
26 to, for example, test those products, constitute acts of direct infringement of at least
27 Claims 18 and 19 of the '775 Patent.

1 68. ~~67.~~ Cox had knowledge of the '775 Patent no later than its receipt of
2 Entropic's communication sent to Cox on August 9, 2022.

3 69. ~~68.~~ Cox has been aware that it infringes the '775 Patent no later than its
4 receipt of Entropic's communication sent to Cox on August 9, 2022.

5 70. ~~69.~~ Cox has known of or has been willfully blind to the '775 Patent since
6 before the August 9, 2022 communication from Entropic.

7 71. ~~70.~~ Cox has been aware that it infringes the '775 Patent since at least as
8 early as receipt of Entropic's August 9, 2022 communication, attached as Exhibit 17.
9 Since obtaining knowledge of the '775 Patent and its infringing activities, Cox has
10 failed to cease its infringing activities.

11 72. ~~71.~~ Customers and subscribers of Cox infringe at least Claims 18 and 19
12 of the '775 Patent by using the claimed system, at least during the use of the Accused
13 Cable Modem Products ~~(for example, the Technicolor CGM4141 cable modem).~~

14 73. ~~72.~~ Cox actively induces customers' direct infringement. For example,
15 Cox actively induces infringement of at least Claims 18 and 19 of the '775 Patent by
16 providing the Accused Cable Modem Products to Cox customers with specific
17 instructions and/or assistance (including installation) regarding the use of the Accused
18 Cable Modem Products to infringe the '775 Patent in accordance with the ordinary
19 course of operation through the provision of the Accused Services. For at least the
20 above-listed reasons, Cox aids, instructs, supports, and otherwise acts with the intent to
21 cause an end user to use the Accused Cable Modem Products to infringe at least Claims
22 18 and 19 of the '775 Patent.

23 74. ~~73.~~ Cox contributes to the customers' direct infringement. Cox provides
24 apparatuses, namely the Accused Cable Modem Products, that are used by customers
25 to directly infringe at least Claims 18 and 19 of the '775 Patent.

26 75. ~~74.~~ The Accused Cable Modem Products have no substantial noninfringing
27 uses. When an end user uses the Accused Cable Modem Products to receive the Accused
28 Services, the end user directly infringes at least Claims 18 and 19 of the '775 Patent.

1 The Accused Cable Modem Products are especially made or especially adapted for use
2 in an infringing manner.

3 76. ~~75.~~ Cox's inducement of, and contribution to, the direct infringement of at
4 least Claims 18 and 19 of the '775 Patent is continuous and ongoing through acts such
5 as providing the Accused Cable Modem Products to Cox customers, which enables
6 those customers to receive the Accused Services; Cox's provision of the Accused
7 Services; and technical assistance provided by Cox for equipment it provides to its
8 customers in support of the provision of the Accused Services.

9 77. ~~76.~~ Cox's infringement of the '775 Patent is, has been, and continues to be
10 willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights under
11 the patent.

12 78. ~~77.~~ Entropic has been damaged as a result of the infringing conduct alleged
13 above. Cox is liable to Entropic in an amount that compensates Entropic for Cox's
14 infringement, which by law cannot be less than a reasonable royalty, together with
15 interest and costs as fixed by this Court under 35 U.S.C. § 284.

16 79. ~~78.~~ Entropic is aware of no obligation to mark any instrumentality with the
17 '775 Patent in accordance with 35 U.S.C. § 287.

18 COUNT II

19 (Infringement of the '690 Patent)

20 80. ~~79.~~ Entropic incorporates by reference each allegation of Paragraphs 1
21 through 78.

22 81. Entropic served infringement contentions which included a claim chart for
23 the '690 Patent on September 15, 2023.

24 82. ~~80.~~ The '690 Patent duly issued on October 9, 2012 from an application
25 filed December 10, 2009, and, *inter alia* a provisional application filed May 19, 2009
26 and a provisional application filed December 15, 2008.

1 83. ~~81.~~ Entropic owns all substantial rights, interest, and title in and to the '690
2 Patent, including the sole and exclusive right to prosecute this action and enforce the
3 '690 Patent against infringers and to collect damages for all relevant times.

4 84. ~~82.~~ The '690 Patent generally describes the process of generating probe
5 transmissions in response to a request from a receiving node of a network, wherein the
6 probe request specifies a plurality of parameters that specify content payload of the
7 probe transmission, and a second node to receive the probe transmission, which
8 enhances flexibility and therefore, improves the receiving node's ability to efficiently
9 recognize the precise form of the transmitted probe. A true and accurate copy of the
10 '690 Patent is attached hereto as Exhibit 3.

11 85. ~~83.~~ The '690 Patent is directed to patent-eligible subject matter pursuant to
12 35 U.S.C. § 101.

13 86. ~~84.~~ The '690 Patent is valid and enforceable, and presumed as such,
14 pursuant to 35 U.S.C. § 282.

15 87. ~~85.~~ Cox deploys one or more of the Accused Cable Modem Products in
16 connection with operating and providing the Accused Services.

17 88. ~~86.~~ The Accused Cable Modem Products deployed by Cox to customer
18 premises remain the property of Cox while deployed.

19 89. ~~87.~~ The Accused Cable Modem Products operate while deployed in a
20 manner controlled and intended by Cox.

21 90. ~~88.~~ As set forth in the attached nonlimiting claim chart (Exhibit 4), Cox
22 has directly infringed and is infringing at least Claims 7, and 8, ~~11, 15, and 16~~ of the
23 '690 Patent by using, importing, selling, and/or offering for sale the Accused Cable
24 Modem Products and/or the Accused Services.

25 91. ~~89.~~ Each aspect of the functioning of the Accused Cable Modem Products
26 described in the claim chart operates while deployed to customer premises in a manner
27 controlled and intended by Cox.

1 92. ~~90.~~ Cox provides no software, support, or other facility to customers to
2 modify any aspect of the functioning described in the claim chart of the Accused Cable
3 Modem Products while deployed to customer premises.

4 93. ~~91.~~ Cox directly infringes at least Claims 7, and ~~8, 11, 15, and 16~~ of the
5 '690 Patent by using, importing, selling, and/or offering for sale the Accused Cable
6 Modem Products (for example, the Technicolor CGM4141 cable modem) and/or the
7 Accused Services (for example, performing bidirectional communication with cable
8 modems).

9 94. ~~92.~~ The use of the Accused Services by Cox to, for example, demonstrate
10 products in brick-and-mortar stores at 66234 Irvine Blvd., Irvine, California 92620;
11 6771 Quail Hill Pkwy., Irvine, California 92603; 23704 El Toro Rd., Lake Forest,
12 California 92630; 27321 La Paz Rd. Suite B, Laguna Niguel, California 92677; 30652
13 Santa Margarita Pkwy. F-101B, Rancho Santa Margarita, California 92688, or to, for
14 example, test those products, constitute acts of direct infringement of at least Claims 7,
15 and ~~8, 11, 15, and 16~~ of the '690 Patent.

16 95. ~~93.~~ Cox had knowledge of the '690 Patent no later than its receipt of
17 Entropic's communication sent to Cox on August 9, 2022.

18 96. ~~94.~~ Cox has been aware that it infringes the '690 Patent no later than its
19 receipt of Entropic's communication sent to Cox on August 9, 2022.

20 97. ~~95.~~ Cox has known of or has been willfully blind to the '690 Patent since
21 before the August 9, 2022 communication from Entropic.

22 98. ~~96.~~ Cox has been aware that it infringes the '690 Patent since at least as
23 early as receipt of Entropic's August 9, 2022 communication, attached as Exhibit 17.
24 Since obtaining knowledge of the '690 Patent and its infringing activities, Cox has
25 failed to cease its infringing activities.

26 99. ~~97.~~ Customers and subscribers of Cox infringe at least Claims 7 and 8 of
27 the '690 Patent by using the claimed method, at least during receipt of the Accused
28

1 Services utilizing, for example, the Accused Cable Modem Products ~~(for example, the~~
2 ~~Technicolor CGM4141 cable modem).~~

3 100. ~~98.~~ Cox actively induces customers' direct infringement. For example,
4 Cox actively induces infringement of at least Claims 7 and 8 of the '690 Patent by
5 providing the Accused Cable Modem Products to Cox customers with specific
6 instructions and/or assistance (including installation) regarding the use of the Accused
7 Cable Modem Products to infringe the '690 Patent in accordance with the ordinary
8 course of operation through the provision of the Accused Services. Cox provides the
9 cable modem functions claimed by the '690 Patent via the Accused Services, which
10 enable and induce its customers to directly infringe the '690 Patent. For at least the
11 above-listed reasons, Cox aids, instructs, supports, and otherwise acts with the intent to
12 cause an end user to use the Accused Cable Modem Products to infringe at least Claims
13 7 and 8 of the '690 Patent.

14 101. ~~99.~~ Cox contributes to the customers' direct infringement. Cox provides
15 apparatuses, namely the Accused Cable Modem Products, that are used by customers
16 to directly infringe at least Claims 7, ~~and~~ and 8 of the '690 Patent.

17 102. ~~100.~~ The Accused Cable Modem Products have no substantial
18 noninfringing uses. When an end user uses the Accused Cable Modem Products to
19 receive the Accused Services, the end user directly infringes at least Claims 7 and 8 of
20 the '690 Patent. The Accused Cable Modem Products are especially made or especially
21 adapted for use in an infringing manner.

22 103. ~~101.~~ Cox's inducement of, and contribution to, the direct infringement of
23 at least Claims 7 and 8 of the '690 Patent is continuous and ongoing through acts such
24 as providing the Accused Cable Modem Products to Cox customers, which enables
25 those customers to receive the Accused Services; Cox's provision of the Accused
26 Services; and technical assistance provided by Cox for equipment it provides to its
27 customers in support of the provision of the Accused Services.

104. ~~102.~~ Cox's infringement of the '690 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights under the patent.

105. ~~103.~~ Entropic has been damaged as a result of the infringing conduct alleged above. Cox is liable to Entropic in an amount that compensates Entropic for Cox's infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

106. ~~104.~~ No apparatus claims of the '690 Patent are presently asserted. Accordingly, there is no duty to mark pursuant to 35 U.S.C. § 287.

COUNT III

(Infringement of the '008 Patent)

107. ~~105.~~ Entropic incorporates by reference each allegation of Paragraphs 1 through 104.

108. Entropic served infringement contentions which included a claim chart for the '008 Patent on September 15, 2023.

109. ~~106.~~ The '008 Patent duly issued on July 29, 2014 from an application filed September 10, 2012, and, *inter alia* a provisional application filed September 8, 2011.

110. ~~107.~~ Entropic owns all substantial rights, interest, and title in and to the '008 Patent, including the sole and exclusive right to prosecute this action and enforce the '008 Patent against infringers and to collect damages for all relevant times.

111. ~~108.~~ The '008 Patent generally describes a system that receives a signal having a plurality of channels, digitizes the received signal, and reports certain signal characteristics to the source of the received signal. A true and accurate copy of the '008 Patent is attached hereto as Exhibit 5.

112. ~~109.~~ The '008 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

113. ~~110.~~ The '008 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

1 114. ~~111.~~ Cox deploys one or more of the Accused Cable Modem Products and
2 Accused Set Top Products in connection with operating and providing the Accused
3 Services.

4 115. ~~112.~~ The Accused Cable Modem Products and Accused Set Top Products
5 deployed by Cox to customer premises remain the property of Cox while deployed.

6 116. ~~113.~~ The Accused Cable Modem Products and Accused Set Top Products
7 operate while deployed in a manner controlled and intended by Cox.

8 117. ~~114.~~ As set forth in the attached nonlimiting claim chart (Exhibit 6), Cox
9 has directly infringed and is infringing at least Claims ~~11-6, 9~~ and ~~210~~ of the '008 Patent
10 by using, importing, selling, and/or offering for sale the Accused Set Top Products
11 and/or the Accused Services.

12 118. ~~115.~~ Each aspect of the functioning of the Accused Cable Modem Products
13 and Accused Set Top Products described in the claim chart operates while deployed to
14 customer premises in a manner controlled and intended by Cox.

15 119. ~~116.~~ Cox provides no software, support, or other facility to customers to
16 modify any aspect of the functioning described in the claim chart of the Accused Set
17 Top Products while deployed to customer premises.

18 120. ~~117.~~ Cox directly infringes at least Claims ~~11-6, 9~~, and ~~210~~ of the '008
19 Patent by using, importing, selling, and/or offering for sale the Accused Cable Modem
20 Products (for example, the Technicolor CGM4141 cable modem), Accused Set Top
21 Products (for example, the Arris AX013ANM STB), and/or the Accused Services (for
22 example, monitoring signals by the Accused Cable Modem Products and Accused Set
23 Top Products).

24 121. ~~118.~~ The use of the Accused Cable Modem Products and Accused Set Top
25 Products by Cox to, for example, demonstrate products in brick-and-mortar stores at
26 66234 Irvine Blvd., Irvine, California 92620; 6771 Quail Hill Pkwy., Irvine, California
27 92603; 23704 El Toro Rd., Lake Forest, California 92630; 27321 La Paz Rd. Suite B,
28 Laguna Niguel, California 92677; 30652 Santa Margarita Pkwy. F-101B, Rancho Santa

1 Margarita, California 92688, or to, for example, test those products, constitute acts of
2 direct infringement of at least Claims ~~1-6, 9,~~ and ~~210~~ of the '008 Patent.

3 ~~122. 119.~~Cox had knowledge of the '008 Patent no later than its receipt of
4 Entropic's communication sent to Cox on August 9, 2022.

5 ~~123. 120.~~Cox has been aware that it infringes the '008 Patent no later than its
6 receipt of Entropic's communication sent to Cox on August 9, 2022.

7 ~~124. 121.~~Cox has known of or has been willfully blind to the '008 Patent since
8 before the August 9, 2022 communication from Entropic.

9 ~~125. 122.~~Cox has been aware that it infringes the '008 Patent since at least as
10 early as receipt of Entropic's August 9, 2022 communication, attached as Exhibit 17.
11 Since obtaining knowledge of the '008 Patent and its infringing activities, Cox has
12 failed to cease its infringing activities.

13 ~~126. 123.~~Customers and subscribers of Cox infringe at least Claims ~~1-6, 9,~~
14 and ~~210~~ of the '008 Patent by using the claimed system, at least during the use of the
15 Accused Cable Modem Products (for example, the Technicolor CGM4141 cable
16 modem) and Accused Set Top Products (for example, the Arris AX013ANM STB).

17 ~~127. 124.~~Cox actively induces customers' direct infringement. For example,
18 Cox actively induces infringement of at least Claims ~~1-6, 9~~ and ~~210~~ of the '008 Patent
19 by providing the Accused Cable Modem Products and Accused Set Top Products to
20 Cox customers with specific instructions and/or assistance (including installation)
21 regarding the use of the Accused Cable Modem Products and Accused Set Top Products
22 to infringe the '008 Patent in accordance with the ordinary course of operation through
23 the provision of the Accused Services. Cox provides the full band digital tuning and
24 signal monitoring functions claimed by the '008 Patent via the Accused Services, which
25 enable and induce its customers to directly infringe the '008 Patent. For at least the
26 above-listed reasons, Cox aids, instructs, supports, and otherwise acts with the intent to
27 cause an end user to use the Accused Set Top Products to infringe at least Claims ~~1-6,~~
28 ~~9,~~ and ~~210~~ of the '008 Patent.

1 128. ~~125.~~ Cox contributes to the customers' direct infringement. Cox provides
2 apparatuses, namely the Accused Cable Modem Products and Accused Set Top
3 Products, that are used by customers to directly infringe at least Claims ~~1~~1-6, 9, and ~~2~~10
4 of the '008 Patent.

5 129. ~~126.~~ The Accused Cable Modem Products and Accused Set Top Products
6 have no substantial noninfringing uses. When an end user uses the Accused Cable
7 Modem Products and Accused Set Top Products to receive the Accused Services, the
8 end user directly infringes at least Claims ~~1~~1-6, 9, and ~~2~~10 of the '008 Patent. The
9 Accused Cable Modem Products and Accused Set Top Products are especially made or
10 especially adapted for use in an infringing manner.

11 130. ~~127.~~ Cox's inducement of, and contribution to, the direct infringement of
12 at least Claims ~~1~~1-6, 9, and ~~2~~10 of the '008 Patent is continuous and ongoing through
13 acts such as providing the Accused Cable Modem Products and Accused Set Top
14 Products to Cox customers, which enables those customers to receive the Accused
15 Services; Cox's provision of the Accused Services; and technical assistance provided
16 by Cox for equipment it provides to its customers in support of the provision of the
17 Accused Services.

18 131. ~~128.~~ Cox's infringement of the '008 Patent is, has been, and continues to
19 be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights
20 under the patent.

21 132. ~~129.~~ Entropic has been damaged as a result of the infringing conduct
22 alleged above. Cox is liable to Entropic in an amount that compensates Entropic for
23 Cox's infringement, which by law cannot be less than a reasonable royalty, together
24 with interest and costs as fixed by this Court under 35 U.S.C. § 284.

25 133. ~~130.~~ Entropic is aware of no obligation to mark any instrumentality with
26 the '008 Patent in accordance with 35 U.S.C. § 287.

COUNT IV

(Infringement of the '362 Patent)

134. ~~131.~~ Entropic incorporates by reference each allegation of Paragraphs 1 through 130.

135. Entropic served infringement contentions which included a claim chart for the '362 Patent on September 15, 2023.

136. ~~132.~~ The '362 Patent duly issued on December 8, 2015 from an application filed February 5, 2015, an application filed August 8, 2013, an application filed April 19, 2010, and, *inter alia* a provisional application filed April 17, 2009.

137. ~~133.~~ Entropic owns all substantial rights, interest, and title in and to the '362 Patent, including the sole and exclusive right to prosecute this action and enforce the '362 Patent against infringers and to collect damages for all relevant times.

138. ~~134.~~ The '362 Patent generally describes a wideband receiver system that down converts a plurality of frequencies including desired television channels and undesired television channels, digitizes frequencies, selects desired television channels from the frequencies, and outputs the selected television channels to a demodulator as a digital data stream. A true and accurate copy of the '362 Patent is attached hereto as Exhibit 7.

139. ~~135.~~ The '362 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

140. ~~136.~~ The '362 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

141. ~~137.~~ Cox deploys one or more of the Accused Set Top Products in connection with operating and providing the Accused Services.

142. ~~138.~~ The Accused Set Top Products deployed by Cox to customer premises remain the property of Cox while deployed.

143. ~~139.~~ The Accused Set Top Products operate while deployed in a manner controlled and intended by Cox.

1 144. ~~140.~~ As set forth in the attached nonlimiting claim chart (Exhibit 8), Cox
2 has directly infringed and is infringing at least ~~Claim~~Claims 11 and 12 of the '362 Patent
3 by using, importing, selling, and/or offering for sale the Accused Set Top Products
4 and/or the Accused Services.

5 145. ~~141.~~ Each aspect of the functioning of the Accused Set Top Products
6 described in the claim chart operates while deployed to customer premises in a manner
7 controlled and intended by Cox.

8 146. ~~142.~~ Cox provides no software, support, or other facility to customers to
9 modify any aspect of the functioning described in the claim chart of the Accused Set
10 Top Products while deployed to customer premises.

11 147. ~~143.~~ Cox directly infringes at least ~~Claim~~Claims 11 and 12 of the '362
12 Patent by using, importing, selling, and/or offering for sale the Accused Set Top
13 Products (for example, the Arris AX013ANM STB) and/or the Accused Services (for
14 example, digitizing and selecting desired television channels provided by Cox).

15 148. ~~144.~~ The use of the Accused Set Top Products by Cox to, for example,
16 demonstrate products in brick-and-mortar stores at 66234 Irvine Blvd., Irvine,
17 California 92620; 6771 Quail Hill Pkwy., Irvine, California 92603; 23704 El Toro Rd.,
18 Lake Forest, California 92630; 27321 La Paz Rd. Suite B, Laguna Niguel, California
19 92677; 30652 Santa Margarita Pkwy. F-101B, Rancho Santa Margarita, California
20 92688, or to, for example, test those products, constitute acts of direct infringement of
21 at least ~~Claim~~Claims 11 and 12 of the '362 Patent.

22 149. ~~145.~~ Cox had knowledge of the '362 Patent no later than its receipt of
23 Entropic's communication sent to Cox on August 9, 2022.

24 150. ~~146.~~ Cox has been aware that it infringes the '362 Patent no later than its
25 receipt of Entropic's communication sent to Cox on August 9, 2022.

26 151. ~~147.~~ Cox has known of or has been willfully blind to the '362 Patent since
27 before the August 9, 2022 communication from Entropic.

28

1 152. ~~148.~~ Cox has been aware that it infringes the '362 Patent since at least as
2 early as receipt of Entropic's August 9, 2022 communication, attached as Exhibit 17.
3 Since obtaining knowledge of the '362 Patent and its infringing activities, Cox has
4 failed to cease its infringing activities.

5 153. ~~149.~~ Customers and subscribers of Cox infringe at least ~~Claim~~Claims 11
6 and 12 of the '362 Patent by using the claimed system, at least during the use of the
7 Accused Set Top Products ~~(for example, the Arris AX013ANM STB).~~

8 154. ~~150.~~ Cox actively induces customers' direct infringement. For example,
9 Cox actively induces infringement of at least ~~Claim~~Claims 11 and 12 of the '362 Patent
10 by providing the Accused Set Top Products to Cox customers with specific instructions
11 and/or assistance (including installation) regarding the use of the Accused Set Top
12 Products to infringe the '362 Patent in accordance with the ordinary course of operation
13 through the provision of the Accused Services. Cox provides the television channel
14 digitization, selection, and output functions claimed by the '362 Patent via the Accused
15 Services, which enable and induce its customers to directly infringe the '362 Patent. For
16 at least the above-listed reasons, Cox aids, instructs, supports, and otherwise acts with
17 the intent to cause an end user to use the Accused Set Top Products to infringe at least
18 ~~Claim~~Claims 11 and 12 of the '362 Patent.

19 155. ~~151.~~ Cox contributes to the customers' direct infringement. Cox provides
20 apparatuses, namely the Accused Set Top Products, that are used by customers to
21 directly infringe at least ~~Claim~~Claims 11 and 12 of the '362 Patent.

22 156. ~~152.~~ The Accused Set Top Products have no substantial noninfringing
23 uses. When an end user uses the Accused Set Top Products to receive the Accused
24 Services, the end user directly infringes at least ~~Claim~~Claims 11 and 12 of the '362
25 Patent. The Accused Set Top Products are especially made or especially adapted for use
26 in an infringing manner.

27 157. ~~153.~~ Cox's inducement of, and contribution to, the direct infringement of
28 at least ~~Claim~~Claims 11 and 12 of the '362 Patent is continuous and ongoing through

1 acts such as providing the Accused Set Top Products to Cox customers, which enables
2 those customers to receive the Accused Services; Cox's provision of the Accused
3 Services; and technical assistance provided by Cox for equipment it provides to its
4 customers in support of the provision of the Accused Services.

5 158. ~~154.~~ Cox's infringement of the '362 Patent is, has been, and continues to
6 be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights
7 under the patent.

8 159. ~~155.~~ Entropic has been damaged as a result of the infringing conduct
9 alleged above. Cox is liable to Entropic in an amount that compensates Entropic for
10 Cox's infringement, which by law cannot be less than a reasonable royalty, together
11 with interest and costs as fixed by this Court under 35 U.S.C. § 284.

12 160. ~~156.~~ No apparatus claims of the '362 Patent are presently asserted.
13 Accordingly, there is no duty to mark pursuant to 35 U.S.C. § 287.

14 COUNT V

15 (Infringement of the '826 Patent)

16 161. ~~157.~~ Entropic incorporates by reference each allegation of Paragraphs 1
17 through 156.

18 162. Entropic served infringement contentions which included a claim chart for
19 the '826 Patent on September 15, 2023.

20 163. ~~158.~~ The '826 Patent duly issued on November 21, 2017 from an
21 application filed November 23, 2015, an application filed July 28, 2014, an application
22 filed September 10, 2012, and, *inter alia* a provisional application filed September 8,
23 2011.

24 164. ~~159.~~ Entropic owns all substantial rights, interest, and title in and to the
25 '826 Patent, including the sole and exclusive right to prosecute this action and enforce
26 the '826 Patent against infringers and to collect damages for all relevant times.

27 165. ~~160.~~ The '826 Patent generally describes a system that receives a signal
28 having a plurality of channels, digitizes the received signal, and reports certain signal

1 characteristics to the source of the received signal. A true and accurate copy of the '826
2 Patent is attached hereto as Exhibit 9.

3 166. ~~161.~~ The '826 Patent is directed to patent-eligible subject matter pursuant
4 to 35 U.S.C. § 101.

5 167. ~~162.~~ The '826 Patent is valid and enforceable, and presumed as such,
6 pursuant to 35 U.S.C. § 282.

7 168. ~~163.~~ Cox deploys one or more of the Accused Cable Modem Products and
8 Accused Set Top Products in connection with operating and providing the Accused
9 Services.

10 169. ~~164.~~ The Accused Cable Modem Products and Accused Set Top Products
11 deployed by Cox to customer premises remain the property of Cox while deployed.

12 170. ~~165.~~ The Accused Cable Modem Products and Accused Set Top Products
13 operate while deployed in a manner controlled and intended by Cox.

14 171. ~~166.~~ As set forth in the attached nonlimiting claim chart (Exhibit 10), Cox
15 has directly infringed and is infringing at least ~~Claim 1~~ Claims 1-4, 6, 8, and 9 of the
16 '826 Patent by using, importing, selling, and/or offering for sale the Accused Cable
17 Modem Products, Accused Set Top Products and/or the Accused Services.

18 172. ~~167.~~ Each aspect of the functioning of the Accused Cable Modem Products
19 and Accused Set Top Products described in the claim chart operates while deployed to
20 customer premises in a manner controlled and intended by Cox.

21 173. ~~168.~~ Cox provides no software, support, or other facility to customers to
22 modify any aspect of the functioning described in the claim chart of the Accused Cable
23 Modem Products and Accused Set Top Products while deployed to customer premises.

24 174. ~~169.~~ Cox directly infringes at least ~~Claim 1~~ Claims 1-4, 6, 8, and 9 of the
25 '826 Patent by using, importing, selling, and/or offering for sale the Accused Cable
26 Modem Products and Accused Set Top Products (for example, the ~~Arris AX013ANM~~
27 ~~STB~~ Technicolor CGM4141 cable modem) and/or the Accused Services (for example,
28

1 monitoring signals by the Accused Cable Modem Products and Accused Set Top
2 Products).

3 175. ~~170.~~ The use of the Accused Cable Modem Products and Accused Set Top
4 Products by Cox to, for example, demonstrate products in brick-and-mortar stores at
5 66234 Irvine Blvd., Irvine, California 92620; 6771 Quail Hill Pkwy., Irvine, California
6 92603; 23704 El Toro Rd., Lake Forest, California 92630; 27321 La Paz Rd. Suite B,
7 Laguna Niguel, California 92677; 30652 Santa Margarita Pkwy. F-101B, Rancho Santa
8 Margarita, California 92688, or to, for example, test those products, constitute acts of
9 direct infringement of at least ~~Claim 1~~ Claims 1-4, 6, 8, and 9 of the '826 Patent.

10 176. ~~171.~~ Cox had knowledge of the '826 Patent no later than its receipt of
11 Entropic's communication sent to Cox on August 9, 2022.

12 177. ~~172.~~ Cox has been aware that it infringes the '826 Patent no later than its
13 receipt of Entropic's communication sent to Cox on August 9, 2022.

14 178. ~~173.~~ Cox has known of or has been willfully blind to the '826 Patent since
15 before the August 9, 2022 communication from Entropic.

16 179. ~~174.~~ Cox has been aware that it infringes the '826 Patent since at least as
17 early as receipt of Entropic's August 9, 2022 communication, attached as Exhibit 17.
18 Since obtaining knowledge of the '826 Patent and its infringing activities, Cox has
19 failed to cease its infringing activities.

20 180. ~~175.~~ Customers and subscribers of Cox infringe at least ~~Claim 1~~ Claims 1-
21 4, 6, 8, and 9 of the '826 Patent by using the claimed system, at least during the use of
22 the Accused Cable Modem Products and Accused Set Top Products ~~(for example, the~~
23 ~~Arris AX013ANM STB).~~

24 181. ~~176.~~ Cox actively induces customers' direct infringement. For example,
25 Cox actively induces infringement of at least ~~Claim 1~~ Claims 1-4, 6, 8, and 9 of the '826
26 Patent by providing the Accused Cable Modem Products and Accused Set Top Products
27 to Cox customers with specific instructions and/or assistance (including installation)
28 regarding the use of the Accused Cable Modem Products and Accused Set Top Products

1 to infringe the '826 Patent in accordance with the ordinary course of operation through
2 the provision of the Accused Services. Cox provides the signal monitoring claimed by
3 the '826 Patent via the Accused Services, which enable and induce its customers to
4 directly infringe the '826 Patent. For at least the above-listed reasons, Cox aids,
5 instructs, supports, and otherwise acts with the intent to cause an end user to use the
6 Accused Cable Modem Products and Accused Set Top Products to infringe at least
7 ~~Claim 1~~ Claims 1-4, 6, 8, and 9 of the '826 Patent.

8 182. ~~177.~~ Cox contributes to the customers' direct infringement. Cox provides
9 apparatuses, namely the Accused Cable Modem Products and Accused Set Top
10 Products, that are used by customers to directly infringe at least ~~Claim 1~~ Claims 1-4, 6,
11 8, and 9 of the '826 Patent.

12 183. ~~178.~~ The Accused Cable Modem Products and Accused Set Top Products
13 have no substantial noninfringing uses. When an end user uses the Accused Cable
14 Modem Products and Accused Set Top Products to receive the Accused Services, the
15 end user directly infringes at least ~~Claim 1~~ Claims 1-4, 6, 8, and 9 of the '826 Patent.
16 The Accused Cable Modem Products and Accused Set Top Products are especially
17 made or especially adapted for use in an infringing manner.

18 184. ~~179.~~ Cox's inducement of, and contribution to, the direct infringement of
19 at least ~~Claim 1~~ Claims 1-4, 6, 8, and 9 of the '826 Patent is continuous and ongoing
20 through acts such as providing the Accused Cable Modem Products and Accused Set
21 Top Products to Cox customers, which enables those customers to receive the Accused
22 Services; Cox's provision of the Accused Services; and technical assistance provided
23 by Cox for equipment it provides to its customers in support of the provision of the
24 Accused Services.

25 185. ~~180.~~ Cox's infringement of the '826 Patent is, has been, and continues to
26 be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights
27 under the patent.

186. ~~181.~~ Entropic has been damaged as a result of the infringing conduct alleged above. Cox is liable to Entropic in an amount that compensates Entropic for Cox's infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

187. ~~182.~~ No apparatus claims of the '826 Patent are presently asserted. Accordingly, there is no duty to mark pursuant to 35 U.S.C. § 287.

COUNT VI

(Infringement of the '682 Patent)

188. ~~183.~~ Entropic incorporates by reference each allegation of Paragraphs 1 through 182.

189. Entropic served infringement contentions which included a claim chart for the '682 Patent on September 15, 2023.

190. ~~184.~~ The '682 Patent duly issued on November 20, 2018 from an application filed January 9, 2018, an application filed February 16, 2017, an application filed August 4, 2016, an application filed July 23, 2013, and, *inter alia* a provisional application filed July 23, 2012.

191. ~~185.~~ Entropic owns all substantial rights, interest, and title in and to the '682 Patent, including the sole and exclusive right to prosecute this action and enforce the '682 Patent against infringers and to collect damages for all relevant times.

192. ~~186.~~ The '682 Patent generally describes a method performed by a cable modem termination system and/or converged cable access platform, the method including determining a corresponding signal-to-noise-ratio ("SNR") related metric, assigning cable modems to service groups based on a respective corresponding SNR-related metric, generating a composite SNR-related metric based on a worst-case SNR profile, selecting a physical layer communication parameter to be used for communicating with a service group based on a composite SNR-related metric, and communicating with cable modems in the service group using the selected physical

1 layer communication parameter. A true and accurate copy of the '682 Patent is attached
2 hereto as Exhibit 11.

3 193. ~~187.~~ The '682 Patent is directed to patent-eligible subject matter pursuant
4 to 35 U.S.C. § 101.

5 194. ~~188.~~ The '682 Patent is valid and enforceable, and presumed as such,
6 pursuant to 35 U.S.C. § 282.

7 195. ~~189.~~ Cox deploys one or more of the Accused Cable Modem Products in
8 connection with operating and providing the Accused Services.

9 196. ~~190.~~ The Accused Cable Modem Products deployed by Cox to customer
10 premises remain the property of Cox while deployed.

11 197. ~~191.~~ The Accused Cable Modem Products operate while deployed in a
12 manner controlled and intended by Cox.

13 198. ~~192.~~ As set forth in the attached nonlimiting claim chart (Exhibit 12), Cox
14 has directly infringed and is infringing at least ~~Claim 1~~ Claims 1-5 and 9 of the '682
15 Patent by using, importing, selling, and/or offering for sale the Accused Services.

16 199. ~~193.~~ Each aspect of the functioning of the Accused Cable Modem Products
17 described in the claim chart operates while deployed to customer premises in a manner
18 controlled and intended by Cox.

19 200. ~~194.~~ Cox provides no software, support, or other facility to customers to
20 modify any aspect of the functioning described in the claim chart of the Accused Cable
21 Modem Products while deployed to customer premises.

22 201. ~~195.~~ Cox directly infringes at least ~~Claim 1~~ Claims 1-5 and 9 of the '682
23 Patent by using, importing, selling, and/or offering for sale the Accused Services, which
24 utilize cable modem termination systems and/or converged cable access platforms that
25 communicate with the Accused Cable Modem Products (for example, the Technicolor
26 CGM4141 cable modem).

27 202. ~~196.~~ The use of the Accused Services by Cox to, for example, demonstrate
28 products in brick-and-mortar stores at 66234 Irvine Blvd., Irvine, California 92620;

6771 Quail Hill Pkwy., Irvine, California 92603; 23704 El Toro Rd., Lake Forest, California 92630; 27321 La Paz Rd. Suite B, Laguna Niguel, California 92677; 30652 Santa Margarita Pkwy. F-101B, Rancho Santa Margarita, California 92688, or to, for example, test those products, constitute acts of direct infringement of at least ~~Claim~~ Claims 1-5 and 9 of the '682 Patent.

203. ~~197.~~ Cox had knowledge of the '682 Patent no later than its receipt of Entropic's communication sent to Cox on August 9, 2022.

204. ~~198.~~ Cox has been aware that it infringes the '682 Patent no later than its receipt of Entropic's communication sent to Cox on August 9, 2022.

205. ~~199.~~ Cox has known of or has been willfully blind to the '682 Patent since before the August 9, 2022 communication from Entropic.

206. ~~200.~~ Cox has been aware that it infringes the '682 Patent since at least as early as receipt of Entropic's August 9, 2022 communication, attached as Exhibit 17. Since obtaining knowledge of the '682 Patent and its infringing activities, Cox has failed to cease its infringing activities.

207. ~~201.~~ Cox's infringement of the '682 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights under the patent.

208. ~~202.~~ Entropic has been damaged as a result of the infringing conduct alleged above. Cox is liable to Entropic in an amount that compensates Entropic for Cox's infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

209. ~~203.~~ No apparatus claims of the '682 Patent are presently asserted. Accordingly, there is no duty to mark pursuant to 35 U.S.C. § 287.

COUNT VII

(Infringement of the '866 Patent)

210. ~~204.~~ Entropic incorporates by reference each allegation of Paragraphs 1 through 203.

1 211. Entropic served infringement contentions which included a claim chart for
2 the '866 Patent on September 15, 2023.

3 212. ~~205.~~ The '866 Patent duly issued on July 5, 2022 from an application filed
4 January 28, 2022, an application filed March 30, 2021, an application filed June 4, 2019,
5 an application filed October 24, 2017, an application filed November 23, 2015, an
6 application filed February 10, 2015, an application filed August 8, 2013, an application
7 filed April 19, 2010, and, *inter alia* a provisional application filed April 17, 2009.

8 213. ~~206.~~ Entropic owns all substantial rights, interest, and title in and to the
9 '866 Patent, including the sole and exclusive right to prosecute this action and enforce
10 the '866 Patent against infringers and to collect damages for all relevant times.

11 214. ~~207.~~ The '866 Patent generally describes a cable television device that
12 digitizes an entire input signal, concurrently selects a plurality of desired channels from
13 the digitized input signal without selecting any undesired channels, and provides the
14 plurality of desired channels. A true and accurate copy of the '866 Patent is attached
15 hereto as Exhibit 13.

16 215. ~~208.~~ The '866 Patent is directed to patent-eligible subject matter pursuant
17 to 35 U.S.C. § 101.

18 216. ~~209.~~ The '866 Patent is valid and enforceable, and presumed as such,
19 pursuant to 35 U.S.C. § 282.

20 217. ~~210.~~ Cox deploys one or more of the Accused Set Top Products in
21 connection with operating and providing the Accused Services.

22 218. ~~211.~~ The Accused Set Top Products deployed by Cox to customer premises
23 remain the property of Cox while deployed.

24 219. ~~212.~~ The Accused Set Top Products operate while deployed in a manner
25 controlled and intended by Cox.

26 220. ~~213.~~ As set forth in the attached nonlimiting claim chart (Exhibit 14), Cox
27 has directly infringed and is infringing at least ~~Claim~~Claims 27, 28, 33, 36, 37, 41, 42,
28

1 [47, 50, and 51](#) of the '866 Patent by using, importing, selling, and/or offering for sale
2 the Accused Set Top Products and/or the Accused Services.

3 [221.](#) ~~214.~~ Each aspect of the functioning of the Accused Set Top Products
4 described in the claim chart operates while deployed to customer premises in a manner
5 controlled and intended by Cox.

6 [222.](#) ~~215.~~ Cox provides no software, support, or other facility to customers to
7 modify any aspect of the functioning described in the claim chart of the Accused Set
8 Top Products while deployed to customer premises.

9 [223.](#) ~~216.~~ Cox directly infringes at least ~~Claim~~[Claims](#) [27, 28, 33, 36, 37, 41, 42,](#)
10 [47, 50, and 51](#) of the '866 Patent by using, importing, selling, and/or offering for sale
11 the Accused Set Top Products (for example, the Arris AX013ANM STB) and/or the
12 Accused Services (for example, digitizing and selecting desired television channels
13 from an input signal).

14 [224.](#) ~~217.~~ The use of the Accused Set Top Products by Cox to, for example,
15 demonstrate products in brick-and-mortar stores at 66234 Irvine Blvd., Irvine,
16 California 92620; 6771 Quail Hill Pkwy., Irvine, California 92603; 23704 El Toro Rd.,
17 Lake Forest, California 92630; 27321 La Paz Rd. Suite B, Laguna Niguel, California
18 92677; 30652 Santa Margarita Pkwy. F-101B, Rancho Santa Margarita, California
19 92688, or to, for example, test those products, constitute acts of direct infringement of
20 at least ~~Claim~~[Claims](#) [27, 28, 33, 36, 37, 41, 42, 47, 50, and 51](#) of the '866 Patent.

21 [225.](#) ~~218.~~ Cox had knowledge of the '866 Patent no later than its receipt of
22 Entropic's communication sent to Cox on August 9, 2022.

23 [226.](#) ~~219.~~ Cox has been aware that it infringes the '866 Patent no later than its
24 receipt of Entropic's communication sent to Cox on August 9, 2022.

25 [227.](#) ~~220.~~ Cox has known of or has been willfully blind to the '866 Patent since
26 before the August 9, 2022 communication from Entropic.

27 [228.](#) ~~221.~~ Cox has been aware that it infringes the '866 Patent since at least as
28 early as receipt of Entropic's August 9, 2022 communication, attached as Exhibit 17.

1 Since obtaining knowledge of the '866 Patent and its infringing activities, Cox has
2 failed to cease its infringing activities.

3 229. ~~222.~~ Customers and subscribers of Cox infringe at least ~~Claim~~Claims 27,
4 28, 33, 36, 37, 41, 42, 47, 50, and 51 of the '866 Patent by using the claimed system, at
5 least during the use of the Accused Set Top Products (for example, the Arris
6 AX013ANM STB).

7 230. ~~223.~~ Cox actively induces customers' direct infringement. For example,
8 Cox actively induces infringement of at least ~~Claim~~Claims 27, 28, 33, 36, 37, 41, 42,
9 47, 50, and 51 of the '866 Patent by providing the Accused Set Top Products to Cox
10 customers with specific instructions and/or assistance (including installation) regarding
11 the use of the Accused Set Top Products to infringe the '866 Patent in accordance with
12 the ordinary course of operation through the provision of the Accused Services. For at
13 least the above-listed reasons, Cox aids, instructs, supports, and otherwise acts with the
14 intent to cause an end user to use the Accused Set Top Products to infringe at least
15 ~~Claim~~Claims 27, 28, 33, 36, 37, 41, 42, 47, 50, and 51 of the '866 Patent.

16 231. ~~224.~~ Cox contributes to the customers' direct infringement. Cox provides
17 apparatuses, namely the Accused Set Top Products, that are used by customers to
18 directly infringe at least ~~Claim~~Claims 27, 28, 33, 36, 37, 41, 42, 47, 50, and 51 of the
19 '866 Patent.

20 232. ~~225.~~ The Accused Set Top Products have no substantial noninfringing
21 uses. When an end user uses the Accused Set Top Products to receive the Accused
22 Services, the end user directly infringes at least ~~Claim~~Claims 27, 28, 33, 36, 37, 41, 42,
23 47, 50, and 51 of the '866 Patent. The Accused Set Top Products are especially made
24 or especially adapted for use in an infringing manner.

25 233. ~~226.~~ Cox's inducement of, and contribution to, the direct infringement of
26 at least ~~Claim~~Claims 27, 28, 33, 36, 37, 41, 42, 47, 50, and 51 of the '866 Patent is
27 continuous and ongoing through acts such as providing the Accused Set Top Products
28 to Cox customers, which enables those customers to receive the Accused Services;

1 Cox's provision of the Accused Services; and technical assistance provided by Cox for
2 equipment it provides to its customers in support of the provision of the Accused
3 Services.

4 234. ~~227.~~ Cox's infringement of the '866 Patent is, has been, and continues to
5 be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights
6 under the patent.

7 235. ~~228.~~ Entropic has been damaged as a result of the infringing conduct
8 alleged above. Cox is liable to Entropic in an amount that compensates Entropic for
9 Cox's infringement, which by law cannot be less than a reasonable royalty, together
10 with interest and costs as fixed by this Court under 35 U.S.C. § 284.

11 236. ~~229.~~ Entropic is aware of no obligation to mark any instrumentality with
12 the '866 Patent in accordance with 35 U.S.C. § 287.

13 COUNT VIII

14 (Infringement of the '206 Patent)

15 237. ~~230.~~ Entropic incorporates by reference each allegation of Paragraphs 1
16 through 229.

17 238. Entropic served infringement contentions which included a claim chart for
18 the '206 Patent on September 15, 2023.

19 239. ~~231.~~ The '206 Patent duly issued on July 26, 2022 from an application filed
20 January 28, 2022, an application filed March 30, 2021, an application filed June 4, 2019,
21 an application filed October 24, 2017, an application filed November 23, 2015, an
22 application filed February 10, 2015, an application filed August 8, 2013, an application
23 filed April 19, 2010, and, *inter alia* a provisional application filed April 17, 2009.

24 240. ~~232.~~ Entropic owns all substantial rights, interest, and title in and to the
25 '206 Patent, including the sole and exclusive right to prosecute this action and enforce
26 the '206 Patent against infringers and to collect damages for all relevant times.

27 241. ~~233.~~ The '206 Patent generally describes ~~a receiver system that~~
28 ~~receives~~receiving an input signal from a cable network, ~~digitizes~~digitizing the entire

1 input signal, ~~concurrently selects~~selecting a plurality of desired channels from the
2 digitized input signal without selecting any undesired channels, and ~~provides~~providing
3 the plurality of desired channels. A true and accurate copy of the '206 Patent is attached
4 hereto as Exhibit 15.

5 242. ~~234.~~ The '206 Patent is directed to patent-eligible subject matter pursuant
6 to 35 U.S.C. § 101.

7 243. ~~235.~~ The '206 Patent is valid and enforceable, and presumed as such,
8 pursuant to 35 U.S.C. § 282.

9 244. ~~236.~~ Cox deploys one or more of the Accused Cable Modem Products and
10 Accused Set Top Products in connection with operating and providing the Accused
11 Services.

12 245. ~~237.~~ The Accused Cable Modem Products and Accused Set Top Products
13 deployed by Cox to customer premises remain the property of Cox while deployed.

14 246. ~~238.~~ The Accused Cable Modem Products and Accused Set Top Products
15 operate while deployed in a manner controlled and intended by Cox.

16 247. ~~239.~~ As set forth in the attached nonlimiting claim chart (Exhibit 16), Cox
17 has directly infringed and is infringing at least ~~Claim 25 of~~Claims 13, 14, 19, 21, 23,
18 25, 26, 31, 34, 35, 38, 39, 44, 47, and 48 of the '206 Patent by using, selling, and/or
19 offering for sale the Accused Services through the Accused Cable Modem Products and
20 Accused Set Top Products.

21 248. ~~240.~~ Each aspect of the functioning of the Accused Cable Modem Products
22 and Accused Set Top Products described in the claim chart operates while deployed to
23 customer premises in a manner controlled and intended by Cox.

24 249. ~~241.~~ Cox provides no software, support, or other facility to customers to
25 modify any aspect of the functioning described in the claim chart of the Accused Cable
26 Modem Products and Accused Set Top Products while deployed to customer premises.

27 250. ~~242.~~ Cox directly infringes at least ~~Claim~~Claims 13, 14, 19, 21, 23, 25, 26,
28 31, 34, 35, 38, 39, 44, 47, and 48 of the '206 Patent by using, importing, selling, and/or

1 offering for sale the Accused Cable Modem Products (for example, the Technicolor
2 CGM4141 cable modem) and Accused Set Top Products (for example, the Arris
3 AX013ANM STB) and/or the Accused Services (for example, digitizing and selecting
4 desired ~~television~~ channels from an input signal).

5 251. 243. The use of the Accused Services through the Accused Cable Modem
6 Products and Accused Set Top Products by Cox to, for example, demonstrate products
7 in brick-and-mortar stores at 66234 Irvine Blvd., Irvine, California 92620; 6771 Quail
8 Hill Pkwy., Irvine, California 92603; 23704 El Toro Rd., Lake Forest, California 92630;
9 27321 La Paz Rd. Suite B, Laguna Niguel, California 92677; 30652 Santa Margarita
10 Pkwy. F-101B, Rancho Santa Margarita, California 92688, or to, for example, test those
11 products, constitute acts of direct infringement of at least ~~Claim~~ Claims 13, 14, 19, 21,
12 23, 25, 26, 31, 34, 35, 38, 39, 44, 47, and 48 of the '206 Patent.

13 252. 244. Customers and subscribers of Cox infringe at least ~~Claim~~ Claims 13,
14 14, 19, 21, 23, 25, 26, 31, 34, 35, 38, 39, 44, 47, and 48 of the '206 Patent by using the
15 claimed method, at least during receipt of the Accused Services utilizing, for example,
16 the Accused Cable Modem Products and Accused Set Top Products ~~(for example, the~~
17 ~~Arris AX013ANM STB).~~

18 253. 245. The Accused Cable Modem Products and Accused Set Top Products
19 have no substantial noninfringing uses. When an end user uses the Accused Cable
20 Modem Products and Accused Set Top Products to receive the Accused Services, the
21 end user directly infringes at least ~~Claim~~ Claims 13, 14, 19, 21, 23, 25, 26, 31, 34, 35,
22 38, 39, 44, 47, and 48 of the '206 Patent. The Accused Cable Modem Products and
23 Accused Set Top Products are especially made or especially adapted for use in an
24 infringing manner.

25 254. Entropic has been damaged as a result of the infringing conduct alleged
26 above. Cox is liable to Entropic in an amount that compensates Entropic for Cox's
27 infringement, which by law cannot be less than a reasonable royalty, together with
28 interest and costs as fixed by this Court under 35 U.S.C. § 284.

255. No apparatus claims of the '206 Patent are presently asserted. Accordingly, there is no duty to mark pursuant to 35 U.S.C. § 287.

COUNT IX

(Infringement of the '275 Patent)

256. Entropic incorporates by reference each allegation of Paragraphs 1 through
247.

257. Entropic served an infringement contention claim chart for the '275 Patent on November 3, 2023.

258. The '275 Patent duly issued on October 10, 2023 from an application filed September 30, 2022, an application filed July 12, 2022, an application filed January 28, 2022, an application filed March 30, 2021, an application filed June 4, 2019, an application filed October 24, 2017, an application filed November 23, 2015, an application filed February 10, 2015, an application filed August 8, 2013, an application filed April 19, 2010, and, *inter alia* a provisional application filed April 17, 2009.

259. Entropic owns all substantial rights, interest, and title in and to the '275 Patent, including the sole and exclusive right to prosecute this action and enforce the '275 Patent against infringers and to collect damages for all relevant times.

260. The '275 Patent generally describes a wideband receiver system that digitizes an input signal, selects desired channels from the digitized signal, and outputs the selected desired channels for demodulation. A true and accurate copy of the '275 Patent is attached hereto as Exhibit 18.

261. The '275 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

262. The '275 Patent is valid and enforceable, and presumed as such, pursuant
to 35 U.S.C. § 282.

263. Cox deploys one or more of the Accused Set Top Products in connection with operating and providing the Accused Services.

1 264. The Accused Set Top Products deployed by Cox to customer premises
2 remain the property of Cox while deployed.

3 265. The Accused Set Top Products operate while deployed in a manner
4 controlled and intended by Cox.

5 266. As set forth in the attached nonlimiting claim chart (Exhibit 19), Cox has
6 directly infringed and is infringing at least Claims 1, 2, 5, 7, 8, 10-12, 15, 17, 18, and
7 20 of the '275 Patent by using, selling, and/or offering for sale the Accused Services
8 through the Accused Set Top Products.

9 267. Each aspect of the functioning of the Accused Set Top Products described
10 in the claim chart operates while deployed to customer premises in a manner controlled
11 and intended by Cox.

12 268. Cox provides no software, support, or other facility to customers to modify
13 any aspect of the functioning described in the claim chart of the Accused Set Top
14 Products while deployed to customer premises.

15 269. Cox directly infringes at least Claims 1, 2, 5, 7, 8, 10-12, 15, 17, 18, and
16 20 of the '275 Patent by using, importing, selling, and/or offering for sale the Accused
17 Set Top Products (for example, the Arris AX013ANM STB) and/or the Accused
18 Services (for example, digitizing and selecting desired television channels from an input
19 signal).

20 270. The use of the Accused Services through the Accused Set Top Products by
21 Cox to, for example, demonstrate products in brick-and-mortar stores at 66234 Irvine
22 Blvd., Irvine, California 92620; 6771 Quail Hill Pkwy., Irvine, California 92603; 23704
23 El Toro Rd., Lake Forest, California 92630; 27321 La Paz Rd. Suite B, Laguna Niguel,
24 California 92677; 30652 Santa Margarita Pkwy. F-101B, Rancho Santa Margarita,
25 California 92688, or to, for example, test those products, constitute acts of direct
26 infringement of at least Claims 1, 2, 5, 7, 8, 10-12, 15, 17, 18, and 20 of the '275 Patent.

271. Customers and subscribers of Cox infringe at least Claims 1, 2, 5, 7, 8, 10-12, 15, 17, 18, and 20 of the '275 Patent by using the claimed method, at least during receipt of the Accused Services utilizing, for example, the Accused Set Top Products.

272. The Accused Set Top Products have no substantial noninfringing uses. When an end user uses the Accused Set Top Products to receive the Accused Services, the end user directly infringes at least Claims 1, 2, 5, 7, 8, 10-12, 15, 17, 18, and 20 of the '275 Patent. The Accused Set Top Products are especially made or especially adapted for use in an infringing manner.

273. ~~246.~~—Entropic has been damaged as a result of the infringing conduct alleged above. Cox is liable to Entropic in an amount that compensates Entropic for Cox’s infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

274. Entropic is aware of no obligation to mark any instrumentality with the
'275 Patent in accordance with 35 U.S.C. § 287.

COUNT X

(Infringement of the '438 Patent)

275. Entropic incorporates by reference each allegation of Paragraphs 1 through
266.

276. Entropic served an infringement contention claim chart for the '438 Patent
on November 3, 2023.

277. The '438 Patent duly issued on January 9, 2018, from an application filed February 16, 2017, an application filed August 4, 2016, an application filed July 23, 2013, and, *inter alia* a provisional application filed July 23, 2012.

278. Entropic owns all substantial rights, interest, and title in and to the '438 Patent, including the sole and exclusive right to prosecute this action and enforce the '438 Patent against infringers and to collect damages for all relevant times.

279. The '438 Patent generally describes a mechanism for determining communication parameters for communications between a cable modem termination

1 system and cable modems. A true and accurate copy of the '438 Patent is attached hereto
2 as Exhibit 20.

3 280. The '438 Patent is directed to patent-eligible subject matter pursuant to
4 35 U.S.C. § 101.

5 281. The '438 Patent is valid and enforceable, and presumed as such, pursuant
6 to 35 U.S.C. § 282.

7 282. Cox deploys one or more of the Accused Cable Modem Products and
8 Accused Set Top Products in connection with operating and providing the Accused
9 Services.

10 283. The Accused Cable Modem Products and Accused Set Top Products
11 deployed by Cox to customer premises remain the property of Cox while deployed.

12 284. The Accused Cable Modem Products operate while deployed in a manner
13 controlled and intended by Cox.

14 285. As set forth in the attached nonlimiting claim chart (Exhibit 21), Cox has
15 directly infringed and is infringing at least Claims 1-5 and 9 of the '438 Patent by using,
16 importing, selling, and/or offering for sale the Accused Services.

17 286. Each aspect of the functioning of the Accused Cable Modem Products and
18 Accused Set Top Products described in the claim chart operates while deployed to
19 customer premises in a manner controlled and intended by Cox.

20 287. Cox provides no software, support, or other facility to customers to modify
21 any aspect of the functioning described in the claim chart of the Accused Cable Modem
22 Products and Accused Set Top Products while deployed to customer premises.

23 288. Cox directly infringes at least Claims 1-5 and 9 of the '438 Patent by using,
24 importing, selling, and/or offering for sale the Accused Services, which utilize cable
25 modem termination systems and/or converged cable access platforms that communicate
26 with the Accused Cable Modem Products and Accused Set Top Products (for example,
27 the Technicolor CGM4141 cable modem).

1 289. The use of the Accused Services by Cox to, for example, demonstrate
2 products in brick-and-mortar stores at 66234 Irvine Blvd., Irvine, California 92620;
3 6771 Quail Hill Pkwy., Irvine, California 92603; 23704 El Toro Rd., Lake Forest,
4 California 92630; 27321 La Paz Rd. Suite B, Laguna Niguel, California 92677; 30652
5 Santa Margarita Pkwy. F-101B, Rancho Santa Margarita, California 92688, or to, for
6 example, test those products, constitute acts of direct infringement of at least Claims 1-
7 5 and 9 of the '438 Patent.

8 290. Cox had knowledge of the '438 Patent no later than its receipt of Entropic's
9 infringement contention claim charts served on November 3, 2023.

10 291. Cox has been aware that it infringes the '438 Patent no later than its receipt
11 of Entropic's infringement contention claim charts served on November 3, 2023.

12 292. Cox has known of or has been willfully blind to the '438 Patent since
13 before the November 3, 2023 infringement contention claim charts were served.

14 293. Cox has been aware that it infringes the '438 Patent since at least as early
15 as receipt of Entropic's November 3, 2023 infringement contention claim charts. Since
16 obtaining knowledge of the '438 Patent and its infringing activities, Cox has failed to
17 cease its infringing activities.

18 294. Cox's infringement of the '438 Patent is, has been, and continues to be
19 willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights under
20 the patent.

21 295. Entropic has been damaged as a result of the infringing conduct alleged
22 above. Cox is liable to Entropic in an amount that compensates Entropic for Cox's
23 infringement, which by law cannot be less than a reasonable royalty, together with
24 interest and costs as fixed by this Court under 35 U.S.C. § 284.

25 296. ~~247.~~ No apparatus claims of the '~~206~~438 Patent are presently asserted.
26 Accordingly, there is no duty to mark pursuant to 35 U.S.C. § 287.

27 **PRAYER FOR RELIEF**

28 WHEREFORE, Entropic requests that:

1 A. The Court find that Cox has directly infringed the Patents-in-Suit and hold
2 Cox liable for such infringement;

3 B. The Court find that Cox has indirectly infringed the Patents-in-Suit by
4 inducing its customers to directly infringe the Patents-in-Suit and hold Cox liable for
5 such infringement;

6 C. The Court find that Cox has indirectly infringed the Patents-in-Suit by
7 contributing to its customers' direct infringement of the Patents-in-Suit and hold Cox
8 liable for such infringement;

9 D. The Court award damages pursuant to 35 U.S.C. § 284 adequate to
10 compensate Entropic for Cox's past infringement of the Patents-in-Suit, including both
11 pre- and post-judgment interest and costs as fixed by the Court;

12 E. The Court increase the damages to be awarded to Entropic by three times
13 the amount found by the jury or assessed by the Court;

14 F. The Court declare that this is an exceptional case entitling Entropic to its
15 reasonable attorneys' fees under 35 U.S.C. § 285; and

16 G. The Court award such other relief as the Court may deem just and proper.

17 **JURY TRIAL DEMANDED**

18 Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Entropic hereby
19 requests a trial by jury on all issues raised by this Complaint.

20
21 Dated: November 10, 2023

Respectfully submitted,

22 By: /s/ Christina N. Goodrich—

23
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28